CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No.: CTCE/BBMP/W.No.09/KRIDL/CEMENT/2013-14

Date: 26.03.2014

TEST REPORT

CLIENT	:	**Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.
AGENCY	:	**Technical Manager,** KRIDL, Bangalore.
NAME OF THE WORK	:	Improvements and Asphalting to road from Nanjappa Circle Dwarak Chowltry to Sapthagiri Layout (KEB Office) Road in Ward No. 09, Vidyaranyapura Sub Division, BBMP, Bangalore.
REFERENCE	:	AEE/BBMP/VSD/PR/295/2013-14 Dated: 22.03.2014
SAMPLE ID	:	CEMENT
SAMPLES SUPPLIED BY	:	AGENCY

The results of the tests conducted on the cement sample are as follows:

Sl.No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 8112-2013
1	Standard Consistency	IS-4031 (Part -4)	28.50 %	-
2	a) Initial Setting Time	IS-4031 (Part -5)	165 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5)	480 Minutes	Not More than 600 Minutes
3	Soundness by the Le-Chatelier method	IS-4031 (Part 3)	1 mm	Not more than 10 mm

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Job No.: CTCE/BBMP/W.No.09/KRIDL/SAND/2013-14 : 26.03.2014

TEST REPORT ON FINE AGGREGATES
IS 383-1970 (RA- 2002)

Client : **Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.

Agency : **Technical Manager,** KRIDL, Bangalore.

Name of Work : Improvements and Asphalting to road from Nanjappa Circle Dwarak Chowltry to Sapthagiri Layout (KEB Office) Road in Ward No. 09, Vidyaranyapura Sub Division, BBMP, Bangalore.

Reference : AEE/BBMP/VSD/PR/295/2013-14 Dated: 22.03.2014

Date of Testing : 26.03.2014

Material : Fine Aggregates Total Wt. of Aggregates in gms **2000**

Is Sieve Size in mm	Weight Retained (gm)	Retained Weight in %	Cumulative Retained Weight in %	Cumulative Weight Passing in %	Spec.Limits For Zone-II
10	0	0	0	100	100
4.75	73	3.65	3.65	96.4	90-100
2.36	312	15.60	19.25	80.8	75-100
1.18	359	17.95	37.20	62.8	55-90
600 Micron	468	23.40	60.60	39.4	35-59
300 Micron	483	24.15	84.75	15.3	8-30
150 Micron	234	11.70	96.45	3.6	0-10

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Job No.: CTCE/BBMP/W.No.09/KRIDL/AGG/2013-14 : 26.03.2014

TEST REPORT ON COARSE AGGREGATES
IS 383-1970 (RA- 2002)

Client : **Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.

Agency : **Technical Manager,** KRIDL, Bangalore.

Name of Work : Improvements and Asphalting to road from Nanjappa Circle Dwarak Chowltry to Sapthagiri Layout (KEB Office) Road in Ward No. 09, Vidyaranyapura Sub Division, BBMP, Bangalore.

Reference : AEE/BBMP/VSD/PR/295/2013-14 Dated: 22.03.2014

Date of Testing : 26.03.2014

Material : 40mm Aggregates

Total Wt. of Aggregates in gms **25150**

Is Sieve Size in mm	Weight Retained (gm)	Retained Weight in %	Cumulative Retained Weight in %	Cumulative Weight Passing in %	Spec.Limits
80	0	0	0	100	100
40	963	3.83	3.83	96.17	95-100
20	15296	60.82	64.65	35.35	30-70
10	5748	22.85	87.50	12.50	10-35
4.75	2753	10.95	98.45	1.55	0-5

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NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No.: CTCE/BBMP/W.No.09/KRIDL/STEEL/2013-14 26.03.2014

TEST REPORT ON REINFORCEMENT STEEL

Client	:	**Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.
Agency	:	**Technical Manager,** KRIDL, Bangalore.
Name of the Work	:	Improvements and Asphalting to road from Nanjappa Circle Dwarak Chowltry to Sapthagiri Layout (KEB Office) Road in Ward No. 09, Vidyaranyapura Sub Division, BBMP, Bangalore.
Reference	:	AEE/BBMP/VSD/PR/295/2013-14 Dated: 22.03.2014
Date of Test	:	26.03.2014
Technical Reference	:	IS: 1786-2008

Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm^2	Tensile strength (Ultimate stress) N/mm^2	Elongation percent gauge length		
1	10	0.62	515	558	13.25	O.K	O.K

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NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No.: CTCE/BBMP/W.No.09/KRIDL/CUBE/2013-14

08.05.2014

TEST REPORT ON CONCRETE CUBES

Client	: **Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.
Agency	: **Technical Manager,** KRIDL, Bangalore.
Name of the work	: Improvements and Asphalting to road from Nanjappa Circle Dwarak Chowltry to Sapthagiri Layout (KEB Office) Road in Ward No. 09, Vidyaranyapura Sub Division, BBMP, Bangalore.
Reference	: AEE/BBMP/VSD/PR/295/2013-14 Dated: 22.03.2014
Sample ID	: Drain Concrete
Size of cubes	: 150mmx150mmx150mm
Cross Sectional Area	: 22500 mm^2
Technical Reference	: IS: 516-1959 (Reaffirmed 2008)
Grade of Concrete	: M_{20}
Compressive Strength as on	: 28^{th} day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	10.04.2014	08.05.2014	8.157	481.4	21.40
2	10.04.2014	08.05.2014	8.262	498.6	22.16
3	10.04.2014	08.05.2014	8.348	523.7	23.28

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Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No.: CTCE/BBMP/W.No.09/KRIDL/WMM/Gradation/2013-14

06.08.2014

GRADATION FOR WMM
MORTH TABLE-400-11

Client : **Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.

Agency : **Technical Manager,** KRIDL, Bangalore.

Name of Work : Improvements and Asphalting to road from Nanjappa Circle Dwarak Chowltry to Sapthagiri Layout (KEB Office) Road in Ward No. 09, Vidyaranyapura Sub Division, BBMP, Bangalore.

Reference : AEE/BBMP/VSD/PR/295/2013-14 Dated: 22.03.2014

Date of Testing : 04.08.2014

Material : WMM

Sample Location : WMM Mix Plant

Oven Dry Wt (gm): **25720**

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits
53	0	0	0	100	100
45	754	754	2.9	97.1	95-100
22.4	6521	7275	28.3	71.7	60-80
11.2	4749	12024	46.7	53.3	40-60
4.75	3653	15677	61.0	39.0	25-40
2.36	3539	19216	74.7	25.3	15-30
0.600	4265	23481	91.3	8.7	8-22
0.075	1884	25365	98.6	1.4	0-8

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Job No.: CTCE/BBMP/W.No.09/KRIDL/SDBC/Bitumen/2013-14 20.08.2014

BITUMEN CONTENT AND GRADATION DETERMINATION OF SEMI DENSE BITUMINOUS CONCRETE MIX

As per IS : 2386 and IRC : SP : 11 - 1984

CLIENT	**Asst. Executive Engineer,** Vidyaranyapura Sub Division, BBMP, Bangalore.
AGENCY	**Technical Manager,** KRIDL, Bangalore.
NAME OF THE WORK	Improvements and Asphalting to road from Nanjappa Circle Dwarak Chowltry to Sapthagiri Layout (KEB Office) Road in Ward No. 09, Vidyaranyapura Sub Division, BBMP, Bangalore.
REFERENCE	AEE/BBMP/VSD/PR/295/2013-14 Dated: 22.03.2014
SAMPLE I/D	Roads in Nanjappa Circle Dwarak Chowltry to Sapthagiri Layout (KEB Office) Road in Ward No. 09
DATE OF TESTING	20.08.2014

BITUMEN CONTENT DETERMINATION

Description	Trail 1	Trail 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	476.5	476
3. Weight of Asphalt and Mineral matter Extracted, g	-	-
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g		
6. Weight of Bitumen Extracted, g. (corrected)	23.5	24.00
7. Bitumen content in %	4.70	4.80
8. Average	**4.75**	

GRADATION AFTER EXTRACTION

SIEVE SIZE	Trail 1				JOBMIX
mm	Weight Retained, gm	% Retained	%Cummulative Retained	% Passing	Gradation
13.2	0	0	0	100	100
9.5	26.35	5.53	5.53	94.47	90-100
4.75	245.78	51.58	57.11	42.89	35-51
2.36	52.16	10.95	68.06	31.94	24-39
1.18	48.68	10.22	78.27	21.73	15-30
0.3	37.92	7.96	86.23	13.77	9-19
0.075	35.21	7.39	93.62	6.38	3-8

SIEVE SIZE	Trail 2				JOBMIX
mm	Weight Retained, gm	% Retained	%Cummulative Retained	% Passing	Gradation
13.2	0	0	0	100	100
9.5	25.83	5.17	5.17	94.83	90-100
4.75	244.63	48.93	54.09	45.91	35-51
2.36	88.75	17.75	71.84	28.16	24-39
1.18	45.62	9.12	80.97	19.03	15-30
0.3	24.96	4.99	85.96	14.04	9-19
0.075	41.23	8.25	94.20	5.80	3-8

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